

29/5/2014

(Comp 4 IT)

COA Sem-IV

(SE comp)

QP Code : NP-19761 IT

(3 Hours)

[Total Marks :80

- N.B.:— (1) Question no.1 is **compulsory**.
 (2) Solve any **three** questions out of remaining **five** questions.
 (3) Assume suitable data if **necessary**.
 (4) Answer to **each** new question to be started on a **fresh** page.

1. (a) What is stored program concept? 3 ✓
 (b) Show IEEE 754 Standards for Binary Floating-Point Representation for 32 bit single format and 64 bit double format. 3 ✓
 (c) What are applications of Microprogramming? 3 ✓
 (d) What is Virtual Memory? 4 ✓
 (e) Explain in brief function of 8089 I/O Processor. 4 ✓
 (f) Name the Flynn's Classification of Parallel Processing Systems. 3 ✓
2. (a) Draw the flow chart for Booth's Algorithm for Twos Complement Multiplication. 5
 (b) Using Booth's Algorithm show the multiplication of 7x5. 7
 (c) Explain with diagram functioning of Microprogrammed Control Unit. 8
3. (a) What are the differences between RISC and CISC processors? ✓ 5 ✓
 (b) Describe hardwired control unit and specify its advantages. ✓ 7 ✓
 (c) What are characteristics of memory devices? ✓ 8 ✓
4. (a) Explain in details Memory Hierarchy with examples. 6 ✓
 (b) What are elements of cache design? Explain in details. ✓ 8 ✓
 (c) What are major requirements for an I/O module? 6 ✓
5. (a) Explain the DMA based data transfer techniques for I/O devices. 8 ✓
 (b) Explain concepts of nanoprogramming. 6 ✓
 (c) What is instruction pipelining? 6 ✓
6. Write short notes on:
 (a) Touch Pad 7 ✓
 (b) L1, L2 and L3 Cache memory. 7 ✓
 (c) Programmed I/O 6 ✓